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Block: 7D

***4.3 Analyzing bones:***

***Big Idea:* *Many real world situations can be modeled and predicted using mathematics.***

***Essential Question: How Can I Use A Math Symbol To Describe a Pattern?***

***A. How tall is a female if her femur is 46.2 centimeters long?***

***The equation for the female femur is -***

***H=61.412 + 2.317F***

**61.412 + 2.317 x 46.2**

**61.412 + 107.0454**

**= 168.4574.**

**A female femur if it is 46.2 centimeters long it will be about 168.4574 tall.**

**B. How tall is a male if his tibia is 50.1 centimeters long?**

**Equation for a male tibia is -**

**H=81.688+2.392**

**81.688+2.392 x 50.1**

**81.688+119.8392**

**201.5272**

**A male tibia would be 201.5272 if it was 50.1 centimeters long.**

**C. If a woman is 152 centimeter (about 5 feet) tall, how long is her femur? Her tibia? Her humerus? Her radius?**

If a woman is 152 centimeters tall her would be Femur: **37.046916 centimeters long;**

Tibia: 31.357283 centimeters long;

Humerus: 27.6797071 centimeters long;

Radius: ﻿20.252321 centimeters long

D. If a man is 183 centimeters long (about 6 feet), how long is his femur? His tibia? His humerus? His radius?

If a man is 183 centimeters tall her Femur would be: 50.898570 centimeters long;

Tibia: 42.35451505 centimeters long;

Humerus: 36.845117 centimeters long; Radius: 28.108219 centimeters long.

**After This Investigation You Should Know:**

* How to solve equations
* The symbolic method
* The value of *y & x*
* How to graph equations
* *Y & x*Intercepts
* Solve linear equations by operating on the symbol
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* The value of *y & x*
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